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CHARACTERISTICS AND LIFESTYLE BEHAVIORS OF EMPLOYEES WHO WORK FOR THE DEPARTMENT OF DEFENSE

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science.

BY

GRETA D. TOTH
B.S.N., Old Dominion University, 1987 '

1992 Wright State University

ABSTRACT

Toth, Greta D. M.S., School of Nursing, Wright State University, 1992. Differences Between Participants and Nonparticipants in a Wellness Program.

The purpose of this comparative descriptive study is to identify differences in the characteristic and lifestyle behavior of employees who work for the Department of Defense. This study will compare and contrast employees who participate in hospital-based wellness centers and those employees who do not attend this wellness center. Data gathered from this research endeavor will increase health care professionals' understanding of employee wellness differences. This information may help to change marketing strategies of wellness centers in order to attract those employees who are non-participants.

The Health-Promoting Lifestyle Profile and a demographic survey will be utilized to collect data from wellness center participants at an Ohio Air Force Base wellness center. The wellness program surveys lifestyle

activities of physical exercise, nutritional status, smoking, stress management and health maintenance.

Descriptive statistics and Chi-Square will be used to analyze the data. An overall demographic and characteristic employee profile will be developed to use for further marketing strategies. The employee's primary reason for participating in the wellness center will be determined by the tool being utilized.

The above information will be useful in developing future health promotional and teaching strategies. A current review of the literature reveals participation in worksite wellness programs lead to cost containment in insurance premiums, absenteeism and expensive maintenance of preventable diseases. Employees would be more knowledgeable about healthier lifestyles, thereby, increasing their motivation to be more active in adopting these practices. Employees would increase their job productivity and morale as well as improving their own quality of life.



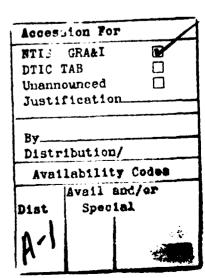


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CHAPTER ONE

INTRODUCTION

Wellness has surpassed the point of being a fad and is now being offered as an added benefit in most workplaces.

The ultimate destination of the wellness movement is to have the healthiest workplace attainable for all employees (Chen, 1988). Worksite health promotion or wellness programs have become an increasingly popular part of American corporate health care policies. While wellness has become a major buzzword in industry, its role in hospital workers and their health and well-being has little documentation.

In an effort to shift from an emphasis on illness care to health care, hospitals have developed wellness centers. Hospitals have been slow in promoting the health of its employees. Hospitals are seeking to market wellness promotion programs to business and industry, but ideally these programs should be developed first for their own employees (Khoiny, 1987).

Statement of the Problem and Purpose

For the most part, previous studies on wellness programs have only described each individual program.

The problem is identified as limited published data that is available which describes the characteristic differences between the participants and non-participants in a wellness program and/or center.

The purpose of this study is to examine the characteristic and lifestyle behavior differences of wellness non-participants employees and those employees who have been active participants for at least three months at a hospital-based wellness center.

Justification and Significance

One justification for this study is that hospitals who provide wellness and preventive health care programs to employees have seen the cost of sponsoring the program offset by lowered health insurance premiums, fewer jobrelated accidents and increased employee production (Khoiny,1987). The benefits that wellness programs provide are both life enriching and financially rewarding. It is important to attract as many participants as possible. If hospitals knew the characteristics of those who participate

regularly in wellness programs, they could alter their current marketing strategies to attract their employees who are not active organization's wellness concept. The hospital's main objective should be to increase the participation of those employees who have not been reached by previous health promotion tactics.

The significance of this particular study is the assistance it provides the Air Force and their wellness concept. This study will be conducted at an Ohio Air Force Base that opened an employee wellness center about a year ago. This center is a pilot study for the Air Force. If it proves beneficial to the employees and employers of this base, then similar wellness centers will be implemented throughout the Air Force. This researcher will describe the characteristics of those who have attended this wellness program and those employees who have not participated. This data will establish to the Air Force the importance of an on-site employee wellness center.

Researchers report that in providing health promotion programs to hospital employees it improves the employees' health, morale, performance and productivity. Programs also have reduced absenteeism due to sickness, burnout, and

high turnover rate (Khoiny 1987). Hospital administrators have found that the cost of sponsoring these programs have been more than offset by lowering health insurance premiums, lessening job-related accidents and increasing employee productivity (Khoiny, 1987). Wellness centers seem to provide multiple life-saving preventions to the employee as well as increasing productivity and morale in an organization.

Research Questions

The research questions for this proposal are, "What are the characteristics and lifestyle behaviors of employees who have used an on-site wellness center for at least three months? What are the characteristics and lifestyle behaviors of employees who have not attended the center? Are there differences in the characteristics of the non-participants and participants who work for the Department of Defense?

Conceptual Definitions

1. Wellness- An integrated method of functioning or a lifestyle design that is oriented toward an individual maximizing their potential for well-being.

The following terms are defined in this study.

2. Lifestyle- Discretionary activities or behaviors that have a significant impact on health status and are an integral part of one's pattern of living (Pender, Sechrist, Stromberg & Walker, 1990).

Operational Definitions

- 1. On-site employee wellness programs- Programs or centers that are within close proximity to the employees' workplace. These programs are designed to promote health in the area of responsibility, nutrition, exercise, reducing health risk factors and stress management (Allen & Delistraty, 1987).
- 2. This study's wellness program has several components.

 These components include a health appraisal survey,
 educational seminars, a variety of supervised exercised

 programs, periodic physical fitness assessments with
 followups and consults. The assessments include a

 medical history, electrocardiogram, exercise tolerance
 testing with analysis of diet, blood lipids, musculoskeletal
 function and body composition.
- 3. Health risk appraisals Lifestyle assessment tools that identify risk factors such as obesity, smoking, high blood pressure, etc. which are precursors of serious diseases (Sherman, 1990). The program in this study uses this type of health risk appraisal.

- 4. Personal characteristics- Distinguishing traits of the employees participating in the wellness center that can be measured by demographic variables of gender, age, occupation, marital status, educational level and motivation.
- 5. Employees used as the population for this study will be all current employees of the Air Force Base, both military and civilian who have been active participants in any of the programs for at least three months.
- 6. Active participants- Those employees who attend any wellness program weekly or exercise at least twice a week.
- 7. Non-participant employees- Those employees who complete the health history survey but do not attend any of the offered programs.

Limitations

One of the limitations of this study is all of the research will be conducted at the Air Force Base wellness center. This sample will be base employees used as a convenience sample and this will limit any generalization.

- 2. There are no other on-site hospital-based wellness centers in this area.
- 3. Another possible limitation is the fact that this

center's program is still in the developmental stages and their personnel have kept poor statistics.

- 4. The wellness center's program is voluntary.
- 5. Most attend the programs on their off-duty work time.
 This may limit the number of participants.

Assumptions

- 1. Employee's health status affects their productivity of work and quality of life.
- 2. A positive change in lifestyle behaviors produces an improved health status and extends the longevity of one's life.

Summary

In summary, nursing holds the key to patient wellness through its ability to enhance the wellness of its own staff. Hospitals that are willing to make changes or develop a wellness center have similar rewards in store. These hospitals will have an enhanced visibility and positive image, increased revenue and an opportunity to join in an ongoing productive relationship with their communities that will ensure the institution's vitality far into the next century.

CHAPTER TWO

REVIEW OF LITERATURE AND THEORETICAL FRAMEWORK INTRODUCTION

In recent years, the term "wellness" has become an allinclusive word for anything involving health. Workplace
wellness is also known as workplace health promotion or
physical fitness programs at the worksite. These programs
are preventive in nature and help to contain health care
costs, to increase worker productivity, and to offer an
added benefit to employees.

Review of Literature

There is little published literature or reported research on hospital-based wellness programs. Most of the published literature has been on rehabilitation programs for clients, and very little on wellness programs established for hospital employees. Of particular interest is any information dealing with the characteristics found in the participants and non-participants of a wellness center.

An original study conducted by Collins (1989), examined the characteristics and health behaviors of individuals who

participated in wellness programs at three business and four community-based programs. The researcher surveyed wellness activities of physical exercise, nutritional awareness, stress management, and health responsibility of only the participants in the programs, but not any individuals who were non-participants. An overall demographic profile of the individual who participated was found to be a college educated female with a mean age of 38 years, married, with one or two children and employed in either a technical/professional or clerical/office occupation. The majority of the participants had annual incomes of less than \$20,000 dollars. Self-motivation was the primary reason cited for participating in the wellness programs. The findings by the researcher were significant; but, it is also important to determine if there is a difference in the characteristics of those who are active participants and those who choose not to incorporate wellness activities into their lifestyles. Since this research will be conducted at hospital-based wellness center, it would be significant to see if employee characteristics are different than those reviewed in the literature.

Hospital-Based Research Studies

Only three of the research studies identified dealt

with hospital-based wellness programs for employees. These were conducted with healthy men and women who were hospital employees as subjects (Allen & Delistraty, 1987; Cox & Montgomery, 1991; Khoiny, 1987). Comparisons were noted in their fitness ability, body fat composition, absenteeism records and their lifestyle health behaviors. One of these studies strictly dealt with female hospital employees as its sample. The investigators in this study evaluated women's aerobic fitness. The results showed very minimal benefits in the participants' physiological status, but the program did provide them with a greater self-esteem and promoted beneficial lifestyle modifications (Allen & Delistraty, 1987).

When absenteeism was researched, it was noted women report more sick days than males. Absenteeism was highest among 41-50 year olds who were white females. These women are the typical women who develop stress-related illnesses and of this age group are certainly most vulnerable to the onset of chronic illness (Cox & Montgomery, 1991).

Evidence is still accumulating in support of regular participation in employee wellness programs and its relationship to lower absenteeism and above average work

productivity. One institution reported reduced absenteeism by 42% among those employees who attended the wellness center regularly. These researchers did not see a difference in absenteeism rates between males and females. They reported higher productivity rates from wellness center members, but the mean productivity did not differ between the sexes (Pender, Smith & Vernof, 1987). These hospital-based wellness studies did not relate any other characteristics or lifestyles of the participants.

In reviewing the literature, four of the studies dealt with wellness at the worksite and predicting health promoting lifestyles. These researchers discussed both financial and physical benefits in being a participant in a wellness program. The employees were all relatively healthy. They reported more health-promoting lifestyles and perceived themselves as competent in handling life situations after their involvement in wellness programs for three months (Pender, Sechrist, Stromberg & Walker, 1990).

In the study by Pender, Sechrist, Stromberg and Walker (1990), they found the extent of health-promoting lifestyle practices was positively related to the belief that the

power of others influenced or exerted an external control over their health. They felt participation in workplace health-promotion programs contributed to reliance on the support of others for sustaining healthful lifestyles. These researchers considered cognitive and perceptual process and how they related to health-promoting lifestyles and demographic information. These findings parallel other studies in both preventive and health-promoting practices seen more in women and older adults (Pender, Sechrist, Stromberg & Walker, 1990).

Studies have shown a higher degree of voluntary employee participation in wellness services offered at the worksite than the usual health arenas. Multiphasic screening programs in industry regularly achieve 90% to 95% participation, whereas identical programs in the community after extensive publicity rarely get more than 30% participation. Health services make it possible to follow individuals and groups over time and thus provide communication, information and social support for the employees (Bruhn and Cordova, 1987).

Worksite Wellness Program Studies

The other studies related to participants' perception

on being in a worksite wellness program. The data were gathered through observation, interviews, and survey techniques. The participants were employed in a variety of job opportunities (Conrad, 1988). One study found that most program attendees were primarily younger females with lower family incomes (Cottrell, Davis, Smith & Zavela, 1988). Other participants' characteristics revealed in this review of literature included that most wellness participants are white women (Pender, Sechrist, Stromberg & Walker, 1990).

Worksite programs have been a developing and growing institution since the late 1970s. Sehnert and Tillotson (1978) investigated how business is involved with health promotion. They identified that businesses offer wellness programs to their employees. These programs include physical fitness, smoking cessation, alcohol/drug intervention, nutrition and weight control, accident prevention, stress management and information on health care services.

The growth of business health care costs is clearly the driving force behind the linking of health promotion to cost containment. Much of the wellness community sees the health

care cost containment potential of health promotion as a critical variable. Many researchers believe the strength of worksite health promotion lies not in its potential to save dollars, but rather to save and to improve lives in a cost-effective manner (Warner, 1990).

Theoretical Framework

Pender's health promotion model is a useful tool to help identify factors which will motivate or deter individuals participation in health promoting behavior (Pender, 1987). The structure of this model is based on three categories which either directly or indirectly influence health promoting behavior. The categories are: cognitive, perceptual, modifying factors and cues to actions (Pender, 1987). These concepts reflect self-direction and self-initiated efforts that strive for greater degrees of health and well-being. These positive health concepts relate to vitality, wellness and self-actualization. Pender's health promotion model provides a framework for developing successful wellness programs and encouraging lasting changes in health-related behaviors (Harrison, 1990). This model describes seven cognitive/perceptual factors that influence the likelihood of a person engaging

in healthful activities. These factors are comprised primarily of motivational mechanisms for acquisition and maintenance of health promoting behaviors, five modifying factors that indirectly influence patterns of health behavior, and cues that result in participation in health promoting behavior (Adamson, Langerno, Oechsle & Volden, 1990). Emphasis of this study will be placed on the cognitive-perceptual factors of perceived control of health, perceived health status, and perceived benefits of health-promoting behaviors; and the modifying factors of demographics and biologic characteristics, interpersonal influences and situational and behavioral factors that may affect the individuals in engaging in health-promotion behaviors (Pender, 1987).

Pender's definition of perceived control of health is when individuals need to believe they can control behaviors necessary to make a change. They must feel they have total control of their health outcomes. Their perceived health status plays a role in the frequency and intensity of health promoting behaviors. When individuals "feel good" they are strongly motivated to engage in positive health behaviors (Marcocci, 1990).

All of Pender's modifying factors have an indirect influence on health promoting behaviors. The demographic characteristics describe the participants and the nonparticipants. Variables such as age, sex, race, ethnicity, educational level, income level, and organizational position level will be considered.

The biological characteristics, such as body weight and percentage of body fat should be examined to see if they are altered with exercise and wellness participation. The interpersonal influences include the individual's significant others and members of the health care team in the wellness center. Individuals need other's support and they seek this support or they may not be an active participant in wellness. The situational factors, such as availability and accessibility of health promotion activities also will effect how individuals make changes to a healthier lifestyle. The behavioral factors that affect lifestyle changes include individual's experiences and successes with previous health promoting behaviors (Pender, 1987).

Pender views the client or participant in wellness as an "active producer" of health rather than a passive

consumer of health care services. Figure 1 is a schematic presentation of Pender's framework as it relates to the wellness center approach. The first circle depicts the individual or the client and what they bring to the wellness center. The client already has an idea of how much control they have over their own health. If an individual perceives themself to be in control it will result in overt health promoting behaviors. Another factor that the client brings is their own perceived health status. This is extremely important because it plays a major part in how active the client will be in participating in their own health promoting behaviors. The other cognitive/perceptual factor that affects how the individual relates to the wellness program is if they perceive wellness as a benefit in their life. If they see health as a benefit, it will facilitate continued practice of healthier lifestyle modifications. The other factors the client brings with them to the health center are the modifying factors. All of the modifying factor components influence the client's adaptation in changing their patterns of health behavior.

The worksite or workplace includes many characteristics that may influence the success of the individual/employee

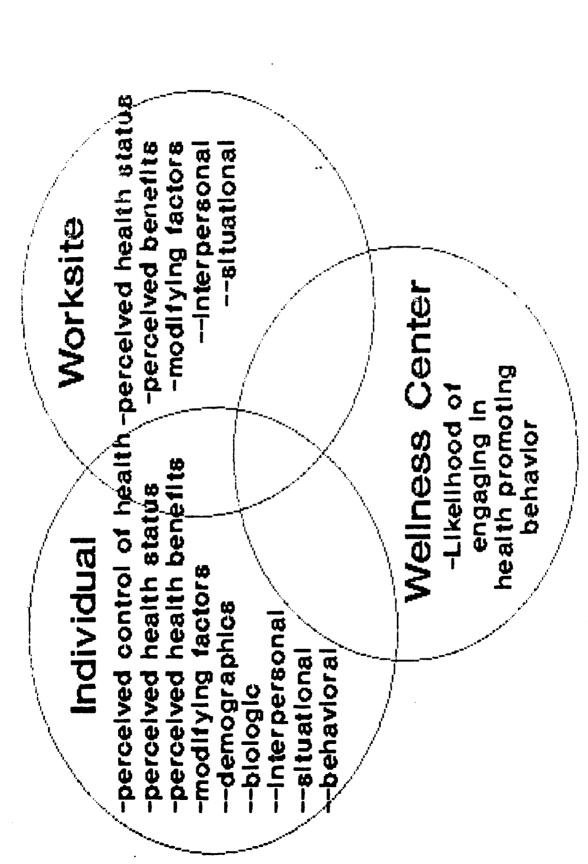


Figure 1 Pender's model adapted to worksite (Pender, 1987)

with the wellness center. The organization or workplace also has a perceived health status of the involved client. They expect certain health habits for the individuals to be employees in their institution. The organization is interested in the perceived benefits of the wellness center because of their invested money in developing it. The institution expects improved health habits, thereby decreasing absenteeism rates, decreasing medical insurance premiums and increasing productivity. Some examples of the modifying factors that an organization or worksite bring to the success of this center include the age of the organization, leadership style and their hierarchial system. Organizational interpersonal influences affect how receptive the employees are in joining the center. It should be a voluntary membership and employees should not be expected to join the center or lose their job. The organization also presents most of the situational factors. These factors are their work hours, accessibility to the center and management's attitude towards wellness. If they do not encourage employees to join or even offer time to participate in the center, the benefits will not be enjoyed by either the institution or the individual.

Both the workplace and the individual interact with each other. They in turn relate and exchange information with the wellness center. This is an open system for all participating parties. If each of these components do not support the other, this exciting concept of wellness will never work.

Summary

There has been some information published on the health and lifestyle characteristics of those hospital employees who participated in wellness programs. The health and lifestyle characteristics of those employees who do not participate in these programs are not known. Obtaining information from these individuals by assessment methods and studying their characteristics and differences may be beneficial from a research perspective. Pender's Health Promotion Model provides an excellent basis for planning health promotions. It is useful in implementing changes, as well as motivating and sustaining individuals in wellness programs.

An individual approach must be maintained for the clients in the wellness center. Nurses, in collaboration with other health professionals, must take the lead in

designing educational programs. Programs should be designed to enhance knowledge and understanding of self-monitoring practices needed by the individual and family to incorporate adherence. Incorporation of these practices lead to healthier lifestyle behaviors and an improved quality of life.

CHAPTER THREE

METHODOLOGY

INTRODUCTION

This comparative descriptive study is designed to identify characteristic and lifestyle behaviors differences of individuals who are active participants and those who are non-participants in hospital-based wellness centers. The research will be non-experimental, and of a non-traditional health promotion design (Burns & Grove, 1987). This chapter will discuss the research design, setting and instruments to be used in answering the research question.

The wellness center used for this study is located at a large Air Force base in Ohio. It is located in a small suburb of a large metropolitan city. This base is one of the largest in the Air Force today. The workforce at this site includes all levels of employees, both civil service and military members. The types of occupations include: clerical, administration, nursing, physicians, laboratory services, pharmacy, accounting, epidemiology, occupational

therapy, manufacturing/production, technical/scientific, and middle and top management positions.

The wellness center began in 1989 and will be in its second year when studied. The center was started as a pilot study for the Air Force; and if successful, will be adopted throughout the service. It is a comprehensive program that is open to all employees on a voluntary basis. An employee may join the center free of charge after an initial screening.

The program is housed in the basement of a large outpatient clinic by the hospital. It consists of a women's and men's locker room, nutritional and cooking center, instructional rooms, an exercise and weight room, and an exercise testing and evaluation area. The director of the program is a registered nurse with a Bachelor's in Health Care Management. The director of exercise evaluation who has a Master's in Health and Fitness assumes many responsibilities in the delivery of the program including screening, review of records and developing an individualized plan of care for each client. His personal guidance influences the success of the wellness program. There is also a full-time dietician with a Bachelors in Nutrition.

The center offers a comprehensive approach to health care. Upon joining, each participant completes a computerized health risk appraisal, laboratory screening examination, a flexibility test with blood pressure measurements and a bicycle treadmill test. This test evaluates the participant's exercise capacity and if there might be a potential for any cardiac/respiratory problems while exercising. After all the testing has been completed, the participant has an individualized plan of care developed and is ready to begin healthy lifestyle practices.

Subjects and Sampling

The target population for this study will consists of all current, full-time employees at a large Ohio Air Force base. Half of the subjects will be employees who have been active participants at the wellness center for at least three months prior to this survey. The remainder of the sample will be employees who are non-participants in this center.

The convenience sample will include 60 participants at the center at the time the data collection is obtained.

Information from 100 clients' records will be obtained to contact those employees who chose not to join the center.

After obtaining informed consent and agency approval, each subject will be surveyed by completing the demographic and ...

Health-Promoting Lifestyle Profile Survey.

Methods/Procedures

The Health-Promoting Lifestyle Profile (Appendix C) by Walker, Sechrist and Pender (1987) is the major instrument used for this study. The Health-Promoting Lifestyle Profile measures health-promoting behavior to show an individual's pattern of self-initiated actions and perceptions to enhance their wellness and self-actualization. The ordinal scale instrument consists of 48 statements that measure the frequency of self-reported health-promoting behaviors in the areas of self-actualization, health responsibility, exercise, nutrition, interpersonal support and stress management (Walker, Sechrist & Pender, 1987).

In addition, a demographic questionnaire (Appendix E) will be utilized to assess variables of age, marital status, education, occupation, and other pertinent demographic information.

The two questionnaires will be distributed to participants of the wellness program and a selection of non-participants to compare differences in lifestyle behaviors

and motivational patterns. The data obtained from the surveys should provide relevant information about differences in employees lifestyle practices and motivational factors influencing health.

This study will be approved by the Wright State Institutional Review Board (Appendix F). Permission to gain entry into the wellness center will be obtained through the hospital's research committee and from the center's director. The director has verbally given permission to conduct the study. Permission will be obtained from the director to review clients' records. The files in the director's office are available on all employees. A nonrandom sample of these records will be completed with every tenth nonmember's file being used. A survey will be mailed to their job address to be returned to this researcher's home within two weeks. Followup letters will be sent in one week to encourage completion of their surveys. A cover letter (Appendix I) will be attached to the first correspondence to provide information about the study and information about the followup letter. Surveys that are mailed will be of a different colored paper to distinguish between the surveys that are completed by

wellness center participants. The surveys completed by the participants will be distributed at the center by this researcher. Completion and return of the questionnaire will indicate the willingness or consent of the individual to participate in this research study. Anonymity will be maintained as no names or coding systems will be used, other than different colored paper for non-participants.

Participants in the study will be able to obtain a summary copy of group results by completing the Request for Information form attached to the cover letter and returning it to the data collector.

Measurements

The Health-Promoting Lifestyle Profile is scored by summing the responses to all 48 items; subscale scores may be obtained by summing the responses to subscale items.

Reliability and validity data have been established in samples of healthy adults. The 48-item instrument was found to have high internal consistency (Alpha=0.922). The six subscales were found to have acceptably high internal consistency estimates, with alphas ranging from 0.70 (stress management) to .90 (self-actualization). All items were entered into factor analysis at a level of 0.35 or higher.

To evaluate stability, this instrument was administered twice and related a Pearson r of 0.93 for the total score, and ranged from 0.81 to 0.91 for the subscales (Stromberg, 1988). Written permission was granted by Dr. Susan Walker to utilize the Health-Promoting Profile Instrument (Appendix B).

In addition to the Health-Promoting Lifestyle Profile instrument, a demographic questionnaire (Appendix E) will be utilized to answer questions describing sociodemographic characteristics in relation to wellness activities. The demographic questionnaire was developed and tested by researcher Collins in 1989. This questionnaire will be modified by this researcher to adapt to this clientele. Ethical Considerations

Some ethical considerations investigate why employees join the wellness center. Employees may not really want to be members of the center but succumb to a perceived pressure from upper management. This must be taken in consideration when analyzing the data from the surveys.

It will be extremely important to maintain confidentiality needs of the clients. Employees with a poor medical history may be reluctant to participate if

confidentiality is not maintained. To obtain their jobs, these employees may have lied about their medical status resulting in job loss. For example, the overweight military member may be hesitant to join because if their weight becomes common knowledge, it would place them on an unfavorable list and could cost them a promotion. By assuring that all information is kept confidential, mistrust will be decreased and participation will be increased. Permission or consent has previously been discussed.

Each completed demographic and Health-Promoting

Lifestyle Profile questionnaires will be analyzed separately

for each group and then collectively for comparison.

Descriptive statistics of means, frequencies, percentages,

and variances will be used to analyze the data. The

demographic information will be treated as nominal and

ordinal.

The inferential statistical test that will be used to compare differences between these two groups is the Chi-Square test of independence. This test will determine if these two groups are independent or related. A difference

can be inferred by the Chi-Square but the magnitude difference cannot be determined by this analysis (Burns & Grove, 1987).

Dummy Tables

Table 1

Demographic Distribution of the Sample by Jobs Categories

	Admin (n=)	Prof (n=)	Tech (n=)	Cler	Serv (n=)
Age (years)	*	%	%	*	*
₹30					
30-39					
40-49					
50-59					
60 & over					
Gender					
Male					
Female					
Income					
<\$20, 0 00					
\$20~\$30,000					
\$30~\$40,000					
\$40-\$50,000					
>\$50,000					
Ethnicity					
White					
Black					
Other					
Education					
(High School					
1-4 yrs College					
Graduate education	on	•			

Table 2

Comparison of Sociodemographic Characteristics

Sociodemographic	Participants	Non-Participant		
Characteristics	(n=)	(n=)		
Sex				
Female				
Male				
Age				
Under 21				
21-30				
31-40				
41-50				
51-60				
over 60				
Marital Status				
Never Married				
Married				
Separated				
Divorced				
Widowed				
Children				
None				
1 or 2				
over 2				
Military Member				
Yes				
No				
If military,				
Officer				
Enlisted				
Not Applicable				

Table 3
Comparison of Sociodemographic Characteristics

Sociodemographic	Participants	Non-p	articipants
Characteristics	(n=)	(n=)
Education			
(High School			
Some college			
College Grad	••		
Grad Educ			
Occupation			
Admin			
Prof			
Tech			
Clerical			
Service			
Income			
<\$20,000			
\$20-\$30,000			
\$30-\$40,000			
\$40-\$50,000			
>\$50,000			
Reason for Participa	ation		
Self-motivation			
Encouraged by far	nily/friend		
Required by emplo	oyer		
Recommended by ph	nysician		
Referred by weigh			

Table 4
Participants' Wellness Activities

Wellness program		Number	*	
1.	Exercise			
2.	Nutrition			

- 2. Nutrition
- 3. Smoking Cessation
- 4. Stress Management
- 5. Other Health Maintenance

Table 5
Health Behavior Subscale Group Comparison

Health Behavior Participants Non-Participants (n=)(n=) 1. Self-Actualization X range stand. deviation 2. Health Responsibility range stand. deviation 3. Exercise X range stand. deviation 4. Nutrition × range stand. deviation 5. Interpersonal Sup. × range stand. deviation 6. Stress Management X range stand. deviation

Threats to Correct Inference

One threat maybe the possibility that

employees/individuals with more positive health-promoting

lifestyle practices are more likely to enroll in a

structured workplace wellness program. This may skew the

results of the Health-Promoting Lifestyles Survey.

The information obtained from the surveys will be selfreported. This is a definite limitation because subjects
may not complete the questionnaire honestly.

Some employees may feel pressured by their supervisors to participate in the wellness programs. These employees may be ambivalent about their feelings on wellness promotion and may not provide truthful answers. Persons in the military who are overweight and placed on the weight management program are strongly encouraged to participate at this center. If these employees only participate because it is mandatory, they may not permanently alter their lifestyles. This could affect how these participants' answer the survey.

Summary

This chapter explains the methodology that will be used to answer the research questions. The type of setting, location, and subjects have been outlined for the study. The instruments to be utilized are the Lifestyle Profile Questionnaire and the demographic questionnaire.

Appropriate data analysis methods have been selected to determine the characteristic and lifestyle behavior differences of employees who work for the Department of Defense.

Appendices

Appendix A
Study Model with Time Frame

Appendix A

Study Model and Time Frame

Appendix B

Dr. Walker's Permission Letter

Dear Colleague:

We are pleased to reply to your request for information about our Health-Promoting Lifestyle Profile. In order to respond promptly to the large volume of correspondence we receive, we have found it necessary to prepare this standard letter containing information that is commonly sought. We hope that you will feel free to write or old as necessary to obtain any further information that you may need.

The <u>Health-Promoting Lifestyle Profile</u> measures health-promoting behavior, conceptualized as a multidimensional pattern of self-initiated actions and perceptions that serve to maintain or enhance the level of wellness, selfactualization and fulfillment of the individual. The 48-item summated behavior rating scale employs a 4-point response format to measure the frequency of selfreported health-promoting behaviors in the domains of self-actualization, health responsibility, exercise, nutrition, interpersonal support and stress management. It was developed for use in research within the framework of the Health Promotion Model (Pender, 1987), but has subsequently been employed for a variety of other purposes as well. The development and psychometric tvaluation of the English language versions were described by Walker, Sechrist and Pender (1987) and scores among the initial study sample were reported by Walker, Volkan, Sechrist and The translation and psychometric evaluation of the Spanish Pender (1988). language version as well as scores among a Hispanic sample were reported by Walker, Kerr, Pender and Sechrist (1990).

Copyright of both English and Spanish language versions of the instrument is held by Susan Noble Walker, EdD, RN, Karen R. Sechrist, PhD, RN, FAAN and Nola J. Pender, PhD, RN, FAAN. You have our permission to copy and use the enclosed Health-Promoting Lifestyle Profile for non-commercial data collection purposes such as research or evaluation projects provided that content is not altered in any way and the copyright/permission statement at the end is retained. instrument also may be reproduced in the appendix of a thesis, dissertation or research grant proposal without further permission. Reproduction for any other purpose, including the publication of study results, is prohibited without specific permission from the authors.

There is no charge for such authorized use, but we would appreciate receiving onotification of your intent to use the instrument and a report of your completed study/project for our files. It is particularly useful to know of any publications reporting use of the instrument so that we can maintain an accurate complete listing. To facilitate record keeping, all information should be sent to:

> Susan Noble Walker, Ed.D., R.N. Associate Professor University of Nebraska Medical Center College of Nursing 600 South 42nd Street Omaha. Nebraska 68198-5330 (402) 559-6561

We thank you for your interest in using the Health-Promoting Lifestyle Profile and wish you much success with your efforts.

Sincerely, Susan M. Walker

Susan Noble Walker Karen R. Sechrist

Nola J. Pender

Appendix C
Lifestyle Profile Questionnaire

LIFESTYLE PROFILE

DIRECTIONS: This questionnaire contains statements regarding your present way of life or personal habits. Please respond to each item as accurately as possible, and try not to skip any item. Indicate the regularity with which you engage in each behavior by circling:

N for never, S for sometimes, O for often, or R for routinely.

		NEVER	SOMETIMES	OFTEN	ROUTINELY
1.	Eat breakfast.	N	S	0	R
2.	Report any unusual signs or symptoms to a physician.	N	S	0	R
3.	Like myself.	N	s	0	R
4.	Perform stretching exercises at least 3 times per week.	N	s	0	R
5 .	Choose foods without preservatives or other additives.	N	s	0	R
6.	Take some time for relaxation each day.	N	s	0	R
7.	Have my cholesterol level checked and know the result.	N	S	0	R
8.	Am enthusiastic and optimistic about life.	N	s	0	R
9.	Feel I am growing and changing personally in positive directions.	N	s	0	R
10.	Discuss personal problems and concerns with persons close to me.	N	s	0	R
11.	Am aware of the sources of stress in my life.	N	s	0	R
12.	Feel happy and content.	N	s	0	R
13.	Exercise vigorously for 20-30 minutes at least 3 times per week.	N	s	0	R
14.	Eat 3 regular meals a day.	N	s	0	R
15.	Read articles or books about promoting health.	N	s	0	R
16.	Am aware of my personal strengths and weaknesses.	N	s	0	R
17.	Work toward long-term goals in my life.	N	s	0	R
18.	Praise other people easily for their accomplishments.	N	s	0	R
19.	Read labels to identify the nutrients in packaged food.	N	s	0	R
20.	Question my physician or seek a second opinion when I do not agree with recommendations.	N	s	0	R
21.	Look forward to the future.	N	s	0	R
22.	Participate in supervised exercise programs or activities.	N	s	0	R
23 .	Am aware of what is important to me in life.	N	S	0	R

	•				
•		NEVER	SOMET	Natro Natro	ROUTINE
24.	Enjoy touching and being touched by people close to me.	N	S	0	R
25.	Maintain meaningful and fulfilling interpersonal relationships.	N	S	0	R
26.	Include roughage/fiber (whole grains, raw fruits, raw vegetables) in my diet.	N	S	0	R
27.	Practice relaxation or meditation for 15-20 minutes daily.	N	S	0	R
28.	Discuss my health care concerns with qualified professionals.	N	S	0	R
29.	Respect my own accomplishments.	N	S	0	R
30 .	Check my pulse rate when exercising.	N	S	0	R
31.	Spend time with close friends.	N	s	0	R
32 .	Have my blood pressure checked and know what it is.	N	s	0	R
33 .	Attend educational programs on improving the environment in which we live.	N	s	0	R
34.	Find each day interesting and challenging.	N	s	0	R
3 5.	Plan or select meals to include the "basic four" food groups each day.	N	s	0	R
36 .	Consciously relax muscles before sleep.	N	s	0	R
37.	Find my living environment pleasant and satisfying.	N	s	0	R
38 .	Engage in recreational physical activities (such as walking, swimming, soccer, bicycling).	N	s	0	R
39.	Find it easy to express concern, love and warmth to others.	N	S	0	R
40 .	Concentrate on pleasant thoughts at bedtime.	N	s	0	R
41.	Find constructive ways to express my feelings.	N	S	0	R
42.	Seek information from health professionals about how to take good care of myself.	N	s	0	R
43 .	Observe my body at least monthly for physical changes/danger signs.	N	S	0	R
44.	Am realistic about the goals that I set.	N	S	0	R
45 .	Use specific methods to control my stress.	N	S	0	R
46 .	Attend educational programs on personal health care.	N	S	0	R
47.	Touch and am touched by people I care about.	N	S	0	R
48.	Believe that my life has purpose.	N	S	0	R

S. Walker, K. Sechrist, N. Pender, 1985. Reproduction without author's express written consent is not permitted. Permission to use this scale may be obtained from: Health Promotion Research Program, School of Nursing, Northern Illinois University, DeKalb, Illinois 60115.

Appendix D

Lifestyle Profile Scoring Instructions

Health-Promoting Lifestyle Profile Scoring Instructions

Total Scale	Ιţ	em	
Health-Promoting Lifestyle	1	to	48

Subscale Items in Subscale

Scoring

SNW 12/85

Appendix E

Demographic Survey

Demographic Data

Directions: The following survey is being administered by a nursing graduate student at Wright State University. Please circle the appropriate response or write in an answer as appropriate.

1.	Gender a. Female b. Male
2.	Write in your current age
3.	Present Marital Status; a. Never Married b. Married c. Separated d. Divorced e. Widowed
4.	Highest level of education: a. Less than a high school graduate b. High school graduate c. Some college d. College graduate e. Graduate education
5.	Write in college degree if applicable
6.	Current occupation.
7.	Military member. a. Yes b. No

8. If military, are you;

c. not applicable

a. officerb. enlisted

- 9. Self Annual Income:
 - a. \$20-000 or less
 - b. \$20,001-\$30,000
 - c. \$30,001-\$40,000
 - d. \$40,001-\$50,000
 - e. \$50,001-over
- 10. Reason for participating in wellness program. If not participating, leave blank.
 - a. Self-motivated
 - b. Encouraged by family/friend.
 - c. Recommended by physician.
 - d. Required by employer.
 - e. On Weight management program.
- 11. If participating, circle what type or types of wellness programs currently enrolled in:
 - a. Exercise
 - b. Nutrition
 - c. Stress Management
 - d. Smoking Cessation
 - e. Other Health Maintenance Program
- 12. Do you attend the wellness center?
 - a. Yes
 - b. No
- 13. Do you participate in any other type of health promotion program (worksite, Vic Tanny, Nautilus, etc)?
 - a. Yes
 - b. No
- 14. If yes, please write in what programs you participate in?
- 15. If non-participant at wellness center, please write in reasons for not participating in wellness program.

Appendix F

IRB Letter

Petition for Approval of Research Involving Human Subjects WSU Office of Research and Sponsored Programs

Date: 13 March 1992	IRB Assignment No.:
Greta D. Toth	
Name of Principal Investigator	Phone Number
Nursing	
Department	Adoress
Position: Faculty S	tudent X Other (specify)
Title of Research Project: Charac	cteristics and Lifestyle Behaviors of Employees
Who Work For the Department	••
	2;
•	
listed as principal investigator, spe Wright-Patterson Air Force Dr. Barbara Fowler	Base Wellness Center
Please answer all questions	
	(1-2 page) description summarizing the objectives and he research (specifically address the subject's role in the
	ch require deception? (Note: use of placebos is not deception ormed that they may receive them.)
Yes No X	
If Yes, then explain fully.	

3. Briefly explain the risks to the subjects of their participation in the research and indicate how the benefits outweigh these risks.

There are a risks

There would be no risk to those who are active participants in the wellness center, but there may be some guilt feelings associated when the non-participants complete the surveys. However, the benefits obtained through the research outweighs the risk for the potential increase in the knowledge base of the participant and page 2 of 4. RSP/IRB-1 (12/89) improve their quality of life.

4.	Does this study involve an interview, survey, or questionnaire? Yes X Nb
	If Yes, check those that apply:
	A. In-person interview B. Telephone interview C. X Self-administered questionnaire D. Other Survey Instrument (briefly describe and attach copies if applicable)
	If yes, I agree to follow the survey Research Guidelines published in the Policies and Procedures Guidelines on the use of Human Subjects in Research Development and Related Activities.
	If Yes, respond to one of the following:
	Indicate the procedure for assuring confidentiality of the data/subject (e.g., responses kept in locked safe, restricted access to information, etc.) or
	Resricted access to the information.
	Indicate the procedure for assuring <u>anonymity</u> of the subject (e.g., no names on instrument(s), no personal identifiers linked to instrument(s), etc.)
	No names will be used, just different colored paper to determine participants from non-participants.
5.	Provision for informed consent. Indicate the type of form to be used (see "Cover Letter/Consent Guidelines," attached). Include copies of the informed consent document(s) with the petition. Also include any written narrative to be presented to the subjects (e.g., cover letter, debriefing information, etc.). You may check more than one response.
	A. Cover letter(s) attached
	B. Consent form(s) attached
	C. Debriefing information attached
	D. If none attached, please explain:
6.	I agree that subjects may withdraw from the project at any time without consequences or loss of benefits.
	If not, explain.

7.	Indicate how subjects will be able to obtain a results after their participation.	in abstract or summary of the completed study
		other participants will not be made available ults be interpreted in reference to the study
	If you do not agree, please explain. Each participant may fill out the recover letter or telephone the facult	equest for information on the bottom of the cy advisor with their name and address.
8.	Remuneration to subjects:	
	Cash Course credit No Remuneration Other (attached explanation)	State amount \$
	If subjects are to be remunerated, indicate the course of their participation.	how this remuneration will be prorated over
The pa	articipants will be recruited from the	e wellness center.
9.		be recruited by the principal investigator? If anisms, please include a copy of the proposed
Non-pa	articipants in the wellness center wild. Surveys will be mailed to 100 non-	-participants. Approval from the
	Are radioisotopes, radiation, or x-rays invol	
	Yes No X	
	that he/she can assess the degree of indiversity along the degree of indiversity and the degree of indiversity and indiversity	involved must be presented to the subjects so idual risk. Indicate the relative amount, e.g., y, the investigator must provide evidence that is in effect for the handling of such materials.
Sign	ature of Principal Investigator	Signature of Faculty Advisor
Sign	ature of Co-Investigator	Signature of Co-Investigator
Sign	ature of Co-Investigator	Signature of Co-Investigator

RSP/IRB-1

(12/89)

Appendix G

Agency Permission Letter

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Appendix H

Director of Wellness Center's Consent

Letter to Review Clients Files

Director's Permission To Use Data From Files

The Wellness Center, Wright-Patterson AFB grants to Greta D. Toth, a student enrolled in a program of nursing leading to a Master's degree at Wright State University, the privilege of using its facilities and clients' files in order to study the characteristics and health behaviors of participants and non-participants of the wellness center.

Jean Herbst Director, WPAFB Wellness Center Appendix I

Agency Cover Letter for Surveys

Characteristics and Health Behaviors of the Department of Defense Employees Who Participate at the Wellness Center

March 1992

Dear Participant,

I am examining the characteristics and health behaviors of employees who work for the Department of Defense as part of my graduate nursing research at Wright State University.

The following demographic sheet and questionnaire require approximate fifteen minutes or less to complete. All information remains anonymous. Please do not include your name. You must be 18 years of age or older to participate in the study. Answer the questions as honestly as possible. After completing the questionnaires, please return it to the data collector.

Thank you for taking the time to assist me in my educational endeavors. Completion and return of the demographic sheet and questionnaire will indicate your willingness to participate in this study. You may obtain a summary copy of the results by completing the Request for Information form (attached below), detaching it, and returning it separately from the surveys.

Sincerely,

Greta D. Toth, B.S.N.
Dr. Barbara Fowler-Faculty Advisor
Wright State University-Miami Valley School of Nursing
873-2607 or 2576

Request for Information

Please send me a summary copy of group results to my address given below. (Return form separately to data collector).

Name:

Address:

City:

State:

Zip Code:

Appendix J

Mailout Cover Letter with Surveys

Characteristics and Health Behavior of Employees Who Work for the Department of Defense

March 1992

Dear Participant,

I am examining the characteristics and health behaviors of employees who work for the Department of Defense as part of my graduate nursing research at Wright State University.

The following demographic sheet and questionnaire require approximately fifteen minutes or less to complete. All information remains anonymous. Please do not include your name. You must be 18 years of age or older to participate in the study. Answer the questions as honestly as possible. After completing the demographic sheet and questionnaire return it in the provided stamped envelope. A followup letter will be mailed to you in 7 days to remind you to return the completed survey. All participants will receive the followup letter, so if you completed and returned the survey, please disregard the followup letter.

Thank you for taking the time to assist me in my educational endeavors. Completion and return of the demographic sheet and questionnaire will indicate your willingness to participate in this study. You may obtain a summary copy of the group results for this research study by calling the faculty advisor at the number listed below and giving your name and address.

Sincerely,

Greta D. Toth, B.S.N.
Dr. Barbara Fowler-Faculty Advisor

Wright State University-Miami Valley School of Nursing

Phone: (513)873-2607 or 2576

Appendix K

Followup Letter

Characteristics and Health Behaviors of Employees Who Work for the Department of Defense

March 1992

Dear Participant,

Thank you for taking the time to review the surveys that were sent to you last week. If you have completed and returned the survey, thank you very much and disregard this letter. If you have forgotten it or misplaced it, attached are the surveys. Please take the time to complete them and return them in the provided stamped envelope. The questionnaire only takes fifteen minutes or less of your time. Let me assure you that all information will remain anonymous.

Thank you for assisting me in my educational endeavors. Completion and return of your demographic sheet and questionnaire will indicate you willingness to participate in this study. You may obtain a summary copy of the group results for this research study by calling the faculty advisor at the phone number listed below and giving your name and address. Thanks again for all your help.

Sincerely,

Greta D. Toth, B.S.N.

Dr. Barbara Fowler-Faculty Advisor

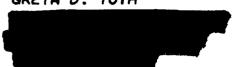
Wright State University-Miami Valley School of Nursing

Phone: (513)873-2607 or 2576

Appendix L

Vita

GRETA D. TOTH



EDUCATION AND TRAINING

- 1987 Bachelors in Science of Nursing--Old Dominion University Norfolk, Virginia
- 1984 Flight Nurse Certification, San Antonio, Texas
- 1983 Nursing Service Management (3 month course), Wichita Falls, Texas
- 1982 Battlefield Nursing Certification, San Antonio Texas
- 1974 Diploma in Nursing, Community Hospital School of Nursing, Springfield, Ohio

PROFESSIONAL EXPERIENCE

- -Served as nurse manager for a medical-oncology unit:
- --Developed a staff recognition program to promote high morale and to recognize those star performers.
- --Designed a staff orientation program that was adopted Air Force wide.
- -Opened a new telemetry unit at Wright-Patterson AFB, overseeing equipment acquisition, establishing a staff training program for a staff of 35, and developing operational procedures for a brand new unit.
- -Developed a 6-week course on electrocardiogram interpretation skills, successfully adopted by several hospitals.
- -Trained key managers in small groups and one-on-one the new documentation and patient acuity systems.
- -Developed an internship program for a new registered nurse that was utilized by the Federal Civil Service Department.
- -Established a reputation as the hospital's authority on oncology clients.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

1992 National Association For Female Executives 1987 Sigma Theta Tau

References

- Adamson, M., Langerno, D., Oechsle, L. & Volden C. (1990).

 The relationship of age, gender, and exercise practices to measures of health, lifestyle and self-esteem.

 Applied Nursing Research, 3, (1), 20-26.
- Allen, J. & Delistraty, D. (1987). Influences of a hospital-based wellness program on employee fitness.

 Health Values, 11, (6), 11-14.
- Bruhn, J. & Cordova, D. (1987). Promoting healthy behavior in the workplace. Health Values, 11, (2), 39-48.
- Burns, N. & Grove, S. (1987). The practice of nursing research. Philadelphia, Pennsylvania: W.B. Saunders.
- Chen, M. (1988). Wellness in the workplace: Beyond the point of no return. Health Values, 12, (1), 16-22.
- Collins, D. (1989). Characteristics and health behaviors of individuals who participate in wellness programs.

 Unpublished master's thesis, Wright State University,

 Dayton, OH.

- Conrad, P. (1988). Health and fitness at work: A participants' perspective. Soc Sc Med, 26,(5), 545-550.
- Cottrell, R., Davis, L., Smith, W. & Zavela, K. (1988).

 Do only the healthy intend to participate in worksite health promotion? Health Education Quarterly, 15, (3), 259-267.
- Cox, C. & Montgomery, A. (1991). Fitness and absenteeism among hospital workers. American Association of Occupational Health Nurse Journal, 39, (4), 189-197.
- Harrison, L. (1990). A health promotion model for wellness education. MCN, 15, 191.
- Hungler, B. & Polit, D. (1983). Nursing research. Boston:

 Duxbury Press.
- Khoiny, F. (1987). The role of the nurse practioner in developing wellness promotion programs for employees in acute care hospital settings. Nursing Administrative Quarterly, 11, (3), 67-71.
- Marcocci, S. (1990). Understanding why some employees ignore worksite health promotion efforts. American Association of Occupational Health Nurse Journal, 38, (11), 531-535.

- Pender, N. (1987). Health promotion is nursing practice.

 Norwalk, Connecticut: Appleton and Lange.
- Pender, N., Sechrist, K., Stromberg, M. & Walker, S. (1990).

 Predicting health-promoting lifestyles in the workplace.

 Nursing Research, 39, (6), 326-331.
- Pender, N., Smith, L. & Vernof, J. (1987). Building

 better. American Association of Occupational Health

 Nurse Journal, 35, (9), 386-390.
- Sehnert, K. & Tillotson, J. (1978). How business can promote good health for employees and their families.

 Washington, D.C.: National Chamber Foundation.
- Sherman, Z. (1990). Health risk appraisal at the worksite.

 American Association of Occupational Health Nurse

 Journal, 38, (1), 18-24.
- Smith, S. & Sorrell, S. (1989). Developing wellness programs: A nurse-managed wellness center for senior citizens. Clinical Nurse Specialist, 3, (4), 198-202.
- Stromberg, M. (1988). <u>Instruments for clinical nursing</u>
 research. Norwalk, Connecticut; Appleton & Lange.
- Warner, K. (1990). Wellness at the worksite. <u>Health</u>
 Values, 63-77.